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Redescription of the tropical huntsman spider *Olios lamarcki* (Latreille, 1806) (Aranei: Sparassidae)

Переописание тропического паука-спарассиды *Olios lamarcki* (Latreille, 1806) (Aranei: Sparassidae)

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КЛЮЧЕВЫЕ СЛОВА: диагноз, таксономия, Ченнаи, Индия.

ABSTRACT. *Olios lamarcki* (Latreille, 1806) is redescribed based on recently collected specimens from Chennai, Tamil Nadu, India. The internal structures of the female copulatory organs are illustrated in detail for the first time.

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РЕЗЮМЕ. Паук *Olios lamarcki* (Latreille, 1806) переописан по новому материалу из Ченнаи, штат Тамил-Наду, Индия. Впервые дано детальное описание внутренних структур копулятивных органов самки самки.

Introduction

The genus *Olios* was established by Walckenaer in 1837. It is the most speciose huntsman spider genus presently comprising 240 described species worldwide, of which 27 species are known from India [WSC, 2018]. Most of the species in the genus are known from their original descriptions only, but with a few exceptions warranting a thorough revision [Jäger, Otto, 2007]. The species, *Olios lamarcki* (Latreille, 1806) was relatively well-studied in India by some European arachnologists [Pocock, 1900; Gravely, 1931] because of its abundance in the tropics. But neither details of the male palp, nor the internal structure of the female copulatory organs are yet known. This paper is based on fresh material collected from the Bethel gardens, Vanianchatiram, Alamathi, Tamil Nadu, India. Both sexes of *O. lamarcki* are illustrated and redescribed in detail.

Material and methods

The specimens were hand-collected and preserved in 70% ethanol. They were later examined and photographed by means of the Leica EZ4 HD stereomicroscope. All images were then processed with the aid of LAS core software (LAS EZ 3.0). The epigyne was dissected and cleared in 10% KOH. All measurements are in millimeters. Leg measurements are given as follows: total length (femur, patella, tibia, metatarsus, tarsus). Spination pattern follows Davies [1994]. The studied specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata. Abbreviations: ALE — anterior lateral eye; AME — anterior median eye; LL — lateral lobe; PLE — posterior lateral eye; PME — posterior median eye; RTA — retrolateral tibial apophysis; TA — tegular apophysis.

Taxonomy

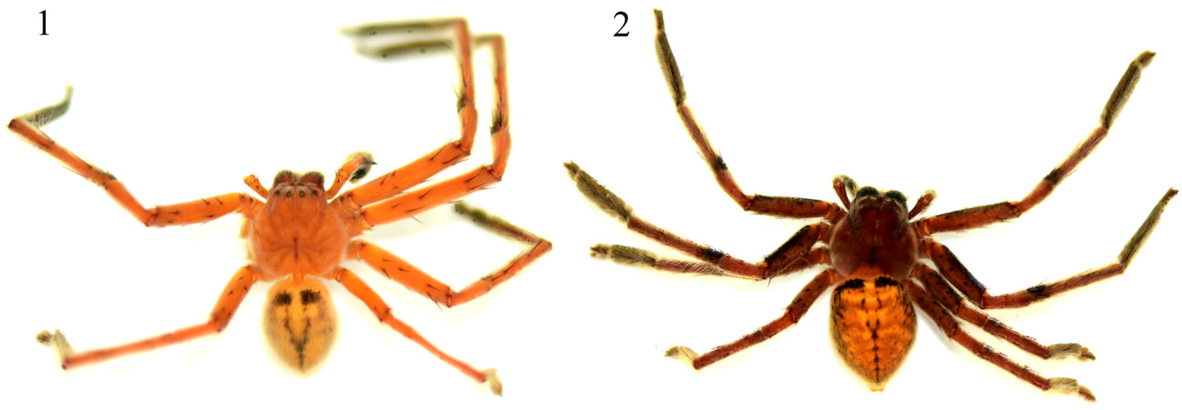
Family Sparassidae Bertkau, 1872
Genus *Olios* Walckenaer, 1837

Olios lamarcki (Latreille, 1806)
Figs 1–17.

Thomisus lamarcki Latreille, 1806: 113 (description of ♂ & ♀).
Olios captiosus Walckenaer, 1837: 565 (description of ♀); Vinson, 1863: 93, 304, pl.2, fig. 1 (description and illustration of ♀).
Olios lamarcki Simon, 1880: 301; Karsch, 1892: 292, pl.11, fig. 14 (description and illustration of ♂ & ♀); Gravely, 1931: 241, figs. 5B, 6B–C (description and illustration of ♂ & ♀); Akash, Jahan, Badhon, 2017: 99, figs. 2a–c (description and illustration of ♀).
Eusparassus lamarcki Järvi, 1914: 60, 176, figs, 50, pl. 4, figs. 11–13 (Description and illustration of ♀).

MATERIAL EXAMINED. 1 ♂ (ZSI-CDT-AA1103), 1 ♀ (ZSI-CDT-AA1104) & 1 subadult ♀ (ZSI-CDT-AA1105), Bethel gardens, Vanianchatiram (13.2160°N, 80.0985°E) 24 m a.s.l., Alamathi, India, leg. J. Daniel & J.T.D. Caleb.

DIAGNOSIS. Medium sized to large spiders (total length female 20.2; male 13.5) (sensu Jäger, 2001). Based on the presence of the triangular, strongly pointed TA in the male palp, the species seems to be related to *O. stimulator* (Simon, 1897), *O. suung* Jäger, 2012 and *O. digitatus* Sun, Li et Zhang, 2011 (cf. Figs 5–6, 13–15 with figs 220 in Sethi & Tikader, 1988, figs 10, 11 in Jäger, 2012 and figs 3, 4 in



Figs 1–2. General habitus of *Olios lamarcki* (Latreille, 1806). 1 — male, dorsal view; 2 — female, dorsal view.
Рис. 1–2. Внешний вид *Olios lamarcki* (Latreille, 1806). 1 — самец, дорсально; 2 — самка, дорсально.

Sun, Li & Zhang, 2011). *O. lamarcki* can be distinguished from the related species by the broad, simple embolus (distal portion spiraled and complex in *O. suung*): characteristic 'T-shaped' conductor; the triangular RTA, uniformly tapering toward its apex (constricted at the base and convex dorsally in *O. stimulator*). The females of *O. stimulator*, *O. suung* and *O. digitatus* are unknown yet. Based on the separated and posteriorly diverging LL, the female epigyne of *O. lamarcki* is similar to that of *O. scalptor* Jäger et Ono, 2001. It can be easily distinguished by the internal structures, for instance, by the oval membranous part (sub-quadrangular in *O. scalptor*), and the glandular part situated in the anterior region (cf. Figs 11, 17 with fig. 16 in Zhu & Tso, 2006).

DESCRIPTION. MALE. Carapace length 6.73, width 6.77, anterior width 3.8. Abdomen length 6.8, width 5.3. Leg formula: 2143; palp and leg measurements: Palp 9.6 (3.2, 0.9, 2.0, –, 3.5), I 37.3 (10.1, 3.9, 9.4, 10.8, 3.1), II 39.8 (11.3, 3.9, 10.3, 11.3, 3.0), III 29.5 (9.2, 2.8, 7.4, 7.5, 2.6), IV 32.4 (9.8, 3.4, 7.9, 8.2, 3.1). Spination: palp 0600, 0010, 1010, 0000; femur 3240, 3230, 3230, 1100; patella I 1000; tibia 3024, 3034, 3024, 2012; metatarsus I–II 2024, III 0024, IV 3014. Eye diameters: AME 0.41, ALE 0.36, PME 0.34, PLE 0.40; eye interdistances: AME–AME 0.28, AME–ALE 0.27, PME–PME 0.63, PME–PLE 0.79, AME–PME 0.50, ALE–PLE 0.33; clypeus AME 0.20, clypeus ALE 0.27. Chelicerae with two anterior and four posterior teeth, without denticles. Embolus crescent shaped, tapering toward the tip; conductor thick 'T-shaped', emerging from 1.30 o'clock position, light yellow in color; TA stout with wrinkled margins, distad, wide 'v-shaped' in retrolateral view; RTA thick and long (Figs 5–6, 13, 15). Coloration in ethanol (Figs 1, 3–4). Body and legs yellowish brown. Carapace with distinct brownish furrows converging at fovea. Chelicerae reddish brown. Sternum, maxillae and labium yellowish. Legs and palps yellowish, with darker metatarsi and tarsi. Abdomen with a distinct black pattern dorsally; a pair of large black spots present anteriorly with thin stripes converging medially and running as a single mid-dorsal stripe till the posterior end; faint brownish markings present along the lateral sides of the abdomen; a broad light brown median patch present ventrally.

FEMALE. Carapace length 8.82, width 8.87, anterior width 5.44; abdomen length 11.4, width 8.6. Leg formula: 2143; palp and leg measurements: Palp 11.1 (3.7, 1.1, 2.4, –, 3.9), I 39 (11.0, 4.1, 10.1, 10.6, 3.2), II 41.4 (12.2, 4.1, 10.9, 11.1, 3.1), III 30.2 (9.2, 3.1, 7.5, 7.6, 2.8), IV 33.2 (10.4, 3.0, 8.1, 8.5, 3.2). Spination: palp 0500, 0010, 1010, 2010; femur I–III 3230, IV 3210; patella II 1000; tibia 2024, 2034, 2024, 2024; metatarsus I–III 0024, IV 0034. Eye diameters: AME 0.52, ALE 0.45, PME 0.41, PLE 0.55; eye interdistances: AME–AME 0.42, AME–ALE 0.43, PME–PME 0.93, PME–PLE 0.96, AME–PME 0.70, ALE–PLE 0.47; clypeus AME 0.34, clypeus ALE 0.39. Chelicerae with two anterior, five (right) and four (left) posterior teeth, devoid of denticles (Fig 9). Epigyne with posteriorly diverging lateral ridges (Figs 10, 16). Copulatory openings (arrowed in Fig. 16) lead to the oval, membranous part having glandular parts on its anterior region; the internal duct system gently descends laterally, making a loop mid-way before ending posteriorly into the fertilization duct (Figs 11–12, 16–17). Coloration in ethanol (Figs 2, 7–9). Carapace without a distinct pattern, as in male; brown in color. Chelicerae dark brown. Sternum, maxillae and labium brown, with yellowish margins on the mouth parts. Legs and palps yellowish brown with darker metatarsi and tarsi. Abdomen yellowish, as in male; a broad black median patch present ventrally.

DISTRIBUTION. Madagascar to Sri Lanka, India [WSC, 2018].

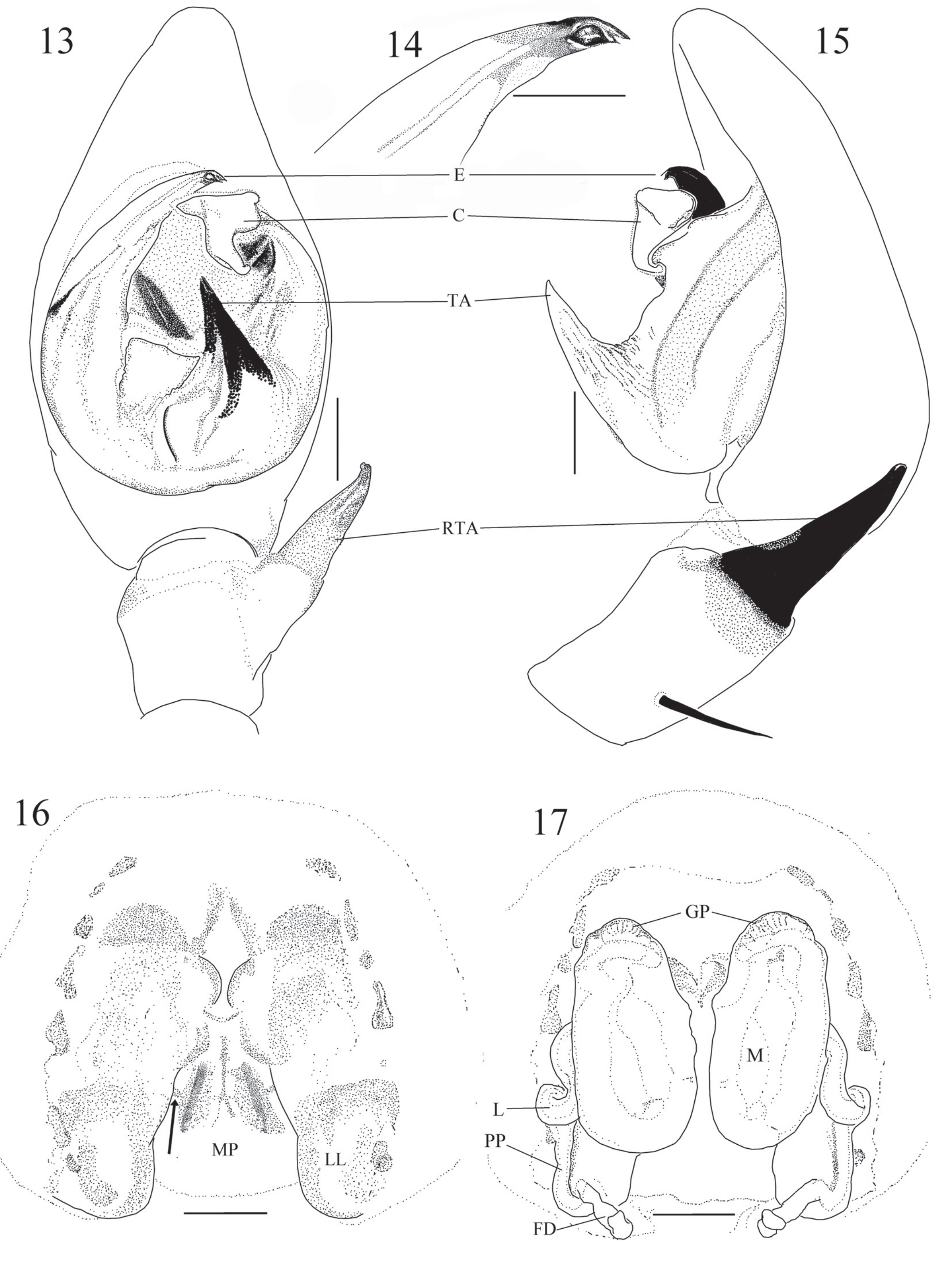
NOTE. Mating plugs have been recorded in 17 species of Sparassids including four species of the genus *Olios* [Uhl *et al*., 2010]. It is recorded in *O. lamarcki* for the first time. Both of the female copulatory openings were found to be plugged with whitish, amorphous secretion (Fig. 10).

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Figs 3–12. Morphology of *Olios lamarcki* (Latreille, 1806). 3 — male, dorsal view; 4 — same, front view; 5 — left male palp, ventral view; 6 — same, retrolateral view; 7 — female, dorsal view; 8 — front view; 9 — female chelicerae, ventral view; 10 — epigyne, ventral view; 11 — vulva, dorsal view; 12 — same, lateral view. Scale bars: 2 mm (3, 7); 1 mm (4, 8–9); 0.5 mm (5, 6, 10–12).

Рис. 3–12. Морфология *Olios lamarcki* (Latreille, 1806). 3 — самец, дорсально; 4 — самец, вид спереди; 5 — левая пальпа самца, вентрально; 6 — то же, ретролатерально; 7 — самка, дорсально; 8 — самка, вид спереди; 9 — хелицеры самки. вентрально; 10 — эпигина, вентрально; 11 — вульва, дорсально; 12 — вульва, вид сбоку. Масштаб: 2 мм (3, 7); 1 мм (4, 8–9); 0,5 мм (5, 6, 10–12).



Figs 13–17. Copulatory organs of *Olios lamarcki* (Latreille, 1806). 13 — left male palp, ventral view; 14 — embolus, the upper half; 15 — left male palp, retrolateral view; 16 — epigyne, ventral view; 17 — spermathecae, dorsal view. Abbreviations: C — conductor; E — embolus; FD — fertilization duct; GP — glandular part; L — lumen; LL — lateral lobe; M — membranous part of the internal duct system; MP — median plate; PP — posterior part of the internal duct system; RTA — retrolateral tibial apophysis; TA — tegular apophysis; arrow indicates the copulatory opening. Scale bars: 0.5 mm (13, 15–17); 0.25 mm (14).

Рис. 13–17. Копулятивные органы *Olios lamarcki* (Latreille, 1806). 13 — левая пальпа самца, вентрально; 14 — эмболюс, верхняя половина; 15 — левая пальпа самца, ретролатерально; 16 — эпигина, вентрально; 17 — сперматека, дорсально. Сокращения: C — кондуктор; E — эмболюс; FD — осеменительный канал; GP — железистый канал; L — просвет; LL — латеральная лопасть; M — мембранизированная часть внутренних канальцев; MP — медиальная пластинка; PP — задняя часть внутренних канальцев; RTA — ретролатеральный вырост голени; TA — вырост тегулума; стрелкой показано копуляторное отверстие. Масштаб: 0,5 мм (13, 15–17); 0,25 мм (14).

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